

WHAT IS CLAIMED IS:

1. A system for removing material buildup from interior walls of a device that produces integrated circuit structures on semiconductor wafers, the device having a chamber for placing the semiconductor wafers, the chamber 5 environmentally coupled to a gas source through a gaseous flow path, the system comprising:
 - a heat source, interposed in the gaseous flow path upstream of the chamber, that heats the gas flowing from the gas supply; and
 - the heated gas placing the atmosphere in at least part of the device at a 10 point where sublimation or evaporation of the material will occur.
2. A process for removing deposited material from a device, the device having interior walls upon which material is deposited, the device suitable for use in production of integrated circuit structures on semiconductor wafers, the process comprising the steps of:
 - 15 creating a flow of gas through said device from a first point in the device; through an exit spaced from said first point in the device, the flow of gas creating an atmospheric pressure of about 100 Torr to normal atmosphere in the device;
 - heating the gas flowing through the device;
 - 20 sublimating or evaporating, based on the combination of the heating and the atmospheric pressure, the deposited material from the surface of the interior wall in the device into a gaseous material; and
 - removing the gaseous material from the device with the gaseous flow.
- 25 3. The process of claim 2 wherein the step of heating is accomplished with a resistive heater.
4. The process of claim 2, the device comprising a chamber, and wherein the step of sublimating or evaporating is directed at deposited material in the 30 chamber.

5. The process of claim 2, the device comprising a purge element, and
wherein the step of sublimating or evaporating is directed at deposited material in
the purge element.

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6. The process of claim 2, wherein the gas is an inert gas.

7. The process of claim 6, wherein the inert gas is nitrogen.

10 8. A process for removing deposited material from a device suitable for use
in production of integrated circuit structures on semiconductor wafers, the device
having interior walls upon which material is deposited, the process comprising
the steps of:

15 changing the material deposited on the interior walls of the device into a
gaseous material; and

removing the gaseous material from the device with a gaseous flow.

20 9. A process for cleaning deposited material off of interior walls of a
production device used in the production of semiconductor devices, the process
comprising the steps of:

25 changing the material deposited on the interior walls of the device into a
gaseous material; and

removing the gaseous material from the device with a gaseous flow.

30 10. A process for running a production device used in the production of
semiconductor devices, the production device maintaining an internal
environment sealed from an external environment when producing a batch of
semiconductor devices, the production device creating material that is deposited
on interior walls of the production device when producing a batch of
semiconductor devices, the process comprising the steps of:

producing a batch of semiconductor devices;
prior to unsealing the production device to the external environment,
changing the material deposited on the interior walls of the device into a gaseous
material; and
5 concurrently with the step of changing, removing the gaseous material
from the device with a gaseous flow.